INSTALLATION MANUAL

DSC Security Products

PC500

Version 1.0

This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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LIMITED WARRANTY *Inside rear cover*

FCC COMPLIANCE *Inside rear cover*

INTRODUCTION

FEATURES

- Fully featured security system with Trouble Supervision, Alarm Memory, Master Code and 3 programmable Access Codes, Quick-Arming and At-Home Arming, Door Chime, 3 one-touch Keypad Zones, and more
- 4 End-of-Line Resistor Supervised Zones
- 6 Programmable Zone Types with Fast and Slow response times and Silent or Audible alarms
- 2 Programmable Outputs with 8 options
- All Installer's Programming is performed at the keypad
- EEPROM memory retains all programming even after all power is removed from the control panel
- Advanced static and lightning protection; unique "Zap-Trac" circuit board design stops damaging voltages at the wiring terminals, and transient protection devices are placed in all critical areas for further protection

SPECIFICATIONS

PC500 Control Panel

- Four fully programmable zones
- Zones are End-of-Line Resistor supervised
- Maximum zone loop resistance: 100 ohms
- Bell/Siren Output: fused for 5A
- Bell/Siren Alarms: steady and pulsed alarms
- Programmable Output: 50 mA with 8 options
- Auxiliary Power Output:
  - 800 mA with 40 VA transformer
  - 500 mA with 20 VA transformer
- Maximum 3 Keypads per system, or Keyswitch operation
- Required Battery: 12 VDC
  - 1.2 Ah provides 4 hours of stand-by at 200 mA Auxiliary Output
  - 4.0 Ah provides 4 hours of stand-by at 800 mA Auxiliary Output
- Required Transformer: 16 VAC, 20 - 40 VA
- Panel dimensions: 10" high x 8" wide x 3" deep (254 x 208 x 76 mm)
- Panel Colour: light beige

SL-40 Keypad

- 12-key keypad
- Three one-touch Zones: [F], [A], [P]
- 3 Status Lights: Ready, Armed, System
- 4 Zone Lights
- All new slimline design
- Keypad dimensions: 4.75" high x 2.75" wide x 1.2" deep (120mm x 70mm x 30mm)
- Keypad Colour: Designer White with Grey display

PC500RK Keypad

- 12-key keypad
- Three one-touch Zones: [F], [A], [P]
- 3 Status Lights: Ready, Armed, System
- 4 Zone Lights
- Nominal current consumption: 30 mA
- Keypad dimensions: 4.5" high x 4.5" wide x 1" deep (114mm x 114mmx 25.4mm)
- Keypad Colour: Mist

INSTALLATION

Mounting the Panel

Select a dry location close to an unswitched AC source and a ground connection.

Remove the printed circuit board, mounting hardware and keypad from the cardboard retainer inside the control panel cabinet. Before attaching the cabinet to the wall, press the four white nylon printed circuit board mounting studs into the raised mounting holes from the back of the cabinet. Also, secure the ground screw to a hole in the cabinet.

Hold the cabinet in position and pull all wires into the cabinet. Mount the cabinet securely to the wall using the mounting screws provided. It is recommended that appropriate wall anchors be used when securing the panel cabinet to drywall, plaster, concrete, brick or other similar surfaces.

Press the PC500 Control Panel onto the nylon mounting studs. Pull all cables into the cabinet and prepare them for connection.

Mounting the Keypad

The PC500 Control Panel is controlled by the SL-40 or PC500RK Keypad. The Keypad should be located close to the designated "Entry-Exit" door and mounted at a height convenient for all users.

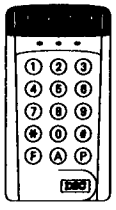
Refer to the illustrations for the keypad included with your control panel. Disassemble the keypad by pressing gently on the locking tab found on the bottom of the unit. With the tab disengaged, pull the backplate from the keypad.

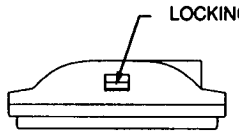
Prepare a hole in the wall at the desired location and pull the keypad wiring through the hole. Hold the backplate in position and pull the wires through the large opening in the backplate. Mount the backplate to the wall using the hardware provided; it is recommended that plastic wall anchors be used. When mounting the backplate, ensure that it is straight and level.

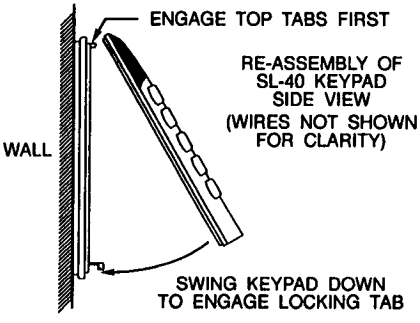
Prepare all wires for connection and connect the keypad wires to the in-wall wiring; refer to the Wiring Diagram in the back of this manual.

Align the keypad with the mounting tabs on the top of the backplate. With the top mounting tabs engaged, swing the keypad down and engage the bottom locking tab. Ensure that the top mounting tabs and the bottom locking tab are securely engaged.

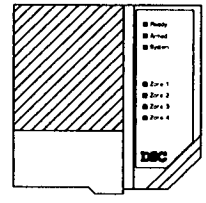
SL-40 Keypad

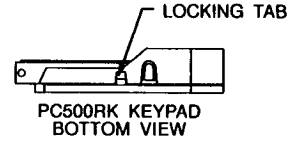


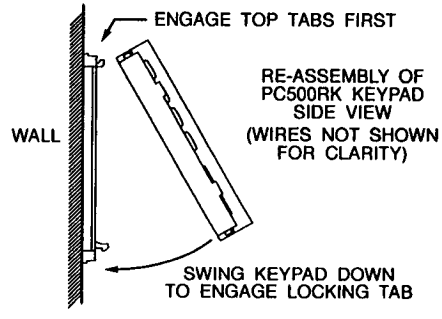




PC500RK Keypad





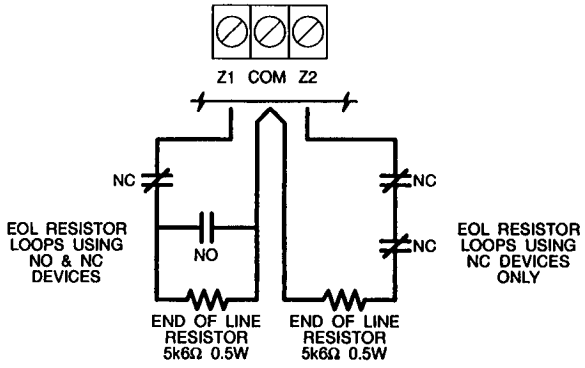


Wiring

NOTE: Complete all wiring to the control panel before applying battery or AC power.

Burglary Zone Wiring

Burglary zone definition, (for example, Delay, Instant, 24-Hour, and so on) is programmed using the keypad. Refer to Programming Guide Section [1].



Burglary Zone Wiring Chart

Wire Gauge	Maximum wire length to End of Line Resistor (feet/meters)
24	1900 / 579
22	3000 / 914
20	2400 / 1493
19	6200 / 1889
18	7800 / 2377

Figures are based on maximum loop resistance of 5k6 ohms.

Auxiliary Power Connection

The Auxiliary Power Supply can be used to power motion detectors and other devices that require 12 VDC. The total load for the Auxiliary Power Supply must be calculated for all devices connected across the AUX +/– terminals and for devices connected between the AUX + and PGM terminals. The output current cannot exceed 800 mA.

PGM Terminal Connections

The PGM terminal is a switched negative output which can be controlled by various programming options; refer to Programming Guide Section [4]. Devices controlled by the PGM output must be connected between the PGM terminal and the AUX+ terminal.

AC Power Wiring

Complete all wiring to the control panel before connecting AC power or the battery. The transformer should not be connected to an outlet that is controlled by a switch.

Battery Connection

If the battery is connected in reverse, the 5 A battery fuse will open and will need to be replaced. The battery charging voltage is factory set and normally needs no adjustment.

If AC power is OFF and the battery voltage drops to approximately 9.5 V or lower, the battery will be automatically disconnected and the panel will power down. To power up again, AC power will have to be re-established. This feature is designed to prevent damage to the battery due to prolonged discharging.

Programming and Connections for Keyswitch Operation

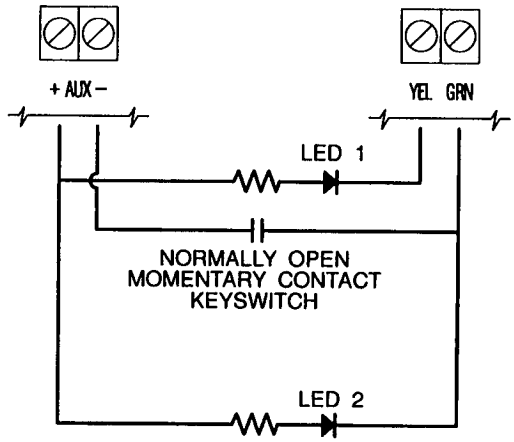
The PC500 may be programmed to enable Keyswitch Arming; refer to Programming Section [5]. Note that when Keyswitch Arming is enabled, a Keypad cannot be used with the system. Also, Refer to Programming Section [4], Programmable Output Options. Note that Option 1, [*][7] activates PGM, will not be functional when Keyswitch Arming is enabled.

Programming for Keyswitch Operation

- With power removed from the PC500, connect a keypad as shown in the Hook-up Diagram at the back of this manual.
- Apply power to the PC500. Refer to the Programming Guide and the Programming Sections and perform all system programming through the connected keypad. Be sure to enable keyswitch operation in Section [05] by turning Light 1 ON.
- When all programming is complete, remove power from the PC500.
- Remove the keypad from the PC500. Refer to Connections for Keyswitch Operation below and connect a keyswitch module to the PC500.
- Apply power to the PC500; LED 1 on the Keyswitch Module will come ON to indicate that the system is ready to be armed.

Connections for Keyswitch Arming

Connect a momentary contact keyswitch module to the PC500 as shown below:



- LED 1 "Ready" indication: This LED will be ON when the system is ready to be armed; the LED will be shut OFF when the keyswitch is closed and the system is armed, or when zones are open.
- LED 2 "Armed" indication: This LED will be ON when the system is armed; the LED will be shut OFF when the keyswitch is closed to disarm the system.
- Exit Delay indication: Both LEDs will be ON during the Exit Delay.

KEYPAD FUNCTIONS

Introduction

The Keypad provides complete control of the PC500 security system. The system can be completely programmed from the keypad. The 4 zone lights provide alarm and status indication for the alarm circuits, and three function lights advise the user of system status. The built-in sounder lets the user hear correct key entries and other alert signals. Keypad alarms may be activated by pressing and holding the [F], [A] or [P] Keys. Note that all keypad entries are made by pressing one key at a time.

Master Code

A default Master Code "1234" is factory programmed into the PC500. The Master Code is used to arm and disarm the system, to reset the sounder after an alarm, to program additional Access Codes, and to perform other user functions. The Master Code may be changed by using the [*][5][Master Code] Program Access Codes command.

Installer's Programming Code

A default Installer's Programming Code "0500" is programmed into the PC500. Using this code and the [*][8] command, the installer can perform programming functions. This code should be changed by the installer after the system is installed; refer to Programming Section [3].

Arming

Before arming the system, close all protected doors and windows and stop movement in areas covered by motion detectors. If the "System" light is on, check for trouble conditions (refer to [*][2]: Display Troubles) and correct the condition. Ensure that any bypassed zones are bypassed intentionally; refer to [*][1][Access Code]: Bypass Zones. If the "Ready" light is not on, one or more zones are open; the system can only be armed when the "Ready" light is ON.

To arm the system, enter a 4-digit Access Code. As each digit is entered, the keypad sounder will beep. When the Access Code has been entered, the "Armed" light will come ON and the keypad will beep 6 times. If the Access Code has been entered incorrectly, the keypad will sound a single long tone; press the [#] Key and enter the Access Code again.

When an Access Code has been entered and the "Armed" light is ON, leave the premises through the designated Entry-Exit door before the Exit Delay expires. At the end of the Exit Delay, all lights on the keypad will be shut OFF except for the "Armed" light.

The default setting for the Exit Delay is 120 seconds. Refer to Programming Section [1] Zone Definitions for information on zone types that are affected by the Exit Delay. Also refer to Programming Section [2] for instructions on changing the Exit Delay.

Auto-Bypass/Home-Away Arming

If an Access Code is entered and the Exit-Entry zone is not activated, the system will arm with interior zones automatically bypassed if those zones have been programmed as Home-Away Zones.

This feature is designed for the user who wishes to remain at home with the system armed. When this feature is enabled, the user does not have to manually bypass zones programmed as Home-Away zones.

At-Home Arming

To eliminate the Entry Delay, arm the system by entering [*][9][Access Code]; and exit through a Delay Zone may then be made as in normal arming. The system will arm as described above in Auto-Bypass/Home-Away arming whether an exit is made or not. The "Armed" light will FLASH to indicate that the system is armed and that there is no entry delay on any of the Delay Zones. If any zone other than a Home-Away zone is activated, an alarm will sound immediately.

Disarming

Enter the premises through the designated Entry-Exit door. The keypad will sound a tone to indicate that the system must be disarmed. Go to the keypad and enter an Access Code. If an error is made entering the code, press the [#] Key and enter the code again. The "Armed" light will be shut OFF and the sounder will be silenced. An Access Code must be entered before the Entry Delay expires or an alarm will sound. To change the Entry Delay, refer to Programming Section [2].

If an alarm occurred while the system was armed, the "System" light and the zone lights of the zones that went into alarm will FLASH for two minutes. Press the [#] Key to cancel the flashing display and to return the system to the "Ready" mode. Refer to [*][3]: Alarm Memory Display.

[*]+[0]: Quick-Arm

The Quick-Arm feature allows a user to enter [*][0] to arm the system. This command is designed to allow someone to arm the system without that person having to be provided with an Access Code. When [*][0] is entered, the Exit Delay will begin and the user may exit the premises through the Entry/Exit door. At the end of the Exit Delay, the system will be fully armed.

[*]+[1]+[Access Code]: Zone Bypassing

A bypassed zone will not cause an alarm. Use zone bypassing when access is needed to part of a protected area when the system is armed, or if damage to sensors or wiring cannot be repaired immediately. The system may be armed with one or more zones bypassed even if the zones are open.

With the system disarmed, enter [*][1][Access Code] to display the bypassed zones; the zone lights of bypassed zones will come ON. Ensure that any zone displayed as being bypassed is intentionally bypassed. Zone bypasses are automatically cancelled when the system is disarmed.

To Bypass Zones:

Enter [*][1][Access Code]; the "System" light will FLASH.

Enter the number of the zone to be bypassed; the corresponding zone light will come ON to indicate that the zone is bypassed. To remove a bypass, enter the zone number and its zone light will be shut OFF. When all desired zones are bypassed, press the [#] Key to return to "Ready".

[*]+[2]: Display Trouble Conditions

The PC500 monitors two possible trouble conditions. If one of these conditions occurs, the keypad "System" light will come ON. If both trouble conditions occur, the keypad sounder will sound two short beeps every 10 seconds. To silence the sounder, press the [#] Key; the sounder will be silenced but the "System" light will remain ON until the trouble conditions are cleared.

To display trouble conditions, enter [*][2]. Trouble conditions are represented with the zone lights; if a zone light comes ON, then that trouble condition is present:

Zone Light

1 **Battery Trouble.** If the battery voltage is low, a battery trouble will be displayed. Note that the Battery Trouble will only be indicated if AC power is off.

2 **AC Failure.** If AC power is removed from the system, an AC trouble will be displayed.

[*]+[3]: Display Alarm Memory

Alarms caused during the previous armed period are stored in memory. To display the zones that went into alarm, enter [*][3]. The "System" light will FLASH and the alarms will be displayed on the flashing zone lights. The Alarm Memory will be cleared when the system is armed.

[*]+[4]: Bell Test

Entering [*][4] will sound the siren and turn ON all the keypad lights for 2 seconds.

[*]+[5]+[Master Code]: Program Access Codes

The [*][5][Master Code] command allows the user to program the Master Code and 3 additional Access Codes.

Enter [*][5][Master Code]. The "Ready", "Armed" and "System" lights will FLASH and the zone lights will indicate which Access Codes have been programmed and which Access Code is presently being programmed:

Zone Light	*Access Code is...*
OFF	not programmed
ON steady	programmed
Flashing	presently being programmed

When the [*][5][Master Code] command is entered, Zone Light 1 will be ON to indicate that the Master Code is programmed with the factory default code.

Changing or Adding a Code

To change Access Codes 1 to 4, enter the number of the code to be changed; the corresponding zone light will begin to FLASH. Enter a new 4-digit Access Code; ***do not press [*] or [#] when entering the code.*** After the code is entered, the keypad will beep 6 times and the zone light will stop flashing and remain ON. If an existing code is being changed, the new code will replace the old one. If another code is to be changed, press the number key for the code to be programmed and enter the new 4-digit code. When all desired changes are complete, press the [#] Key to return to "Ready".

Erasing a Code

To erase a code, enter [*][5][Master Code]. Enter the number of the code to be erased; the zone light for the code will FLASH. Enter [****] to erase the Access Code. **NOTE:** Do not erase the Master Code. If the Master Code is accidentally erased, reset the system's programming to the factory default settings. Refer to "Reset to Factory Default" for instructions on restoring the system's factory default programming.

[*]+[6]: Door Chime On/Off

The Door Chime feature causes the keypad to beep whenever a Delay or Instant Zone is activated. This feature is useful if the Entry/Exit door or doors are out of view, and the user desires an indication of when the door zones are opened and closed. The Door Chime feature only functions when the system is disarmed.

To turn the Door Chime feature on or off, enter [*][6]. If the feature is being turned ON, the keypad sounder will beep 3 times. If the feature is being turned OFF, the sounder will emit a single long tone.

[*]+[7]: Utility Output Command

The PGM1 and PGM2 Outputs may be programmed to be activated by entering a keypad command. Refer to Section [4] for information on programming the PGM Output Options. If the keypad command is selected, entering [*][7] on the keypad will activate the keypad sounder and the PGM output for 5 seconds.

This feature can be used to operate devices such as door strikes or special lighting. Note that if Keyswitch Arming is used with the system, this command will not be functional.

[*]+[8]+[Installer's Code]: Installer's Programming Command

The PC500 is programmed from the keypad by using commands in the [*][8] section. These commands are described in detail in the Programming Section of this manual. The default Installer's Code is [0500].

[*]+[9]+[Access Code]: At-Home Arming

Entering [*][9] before entering an Access Code will arm the system and remove the Entry Delay from the Delay Zones. All "Home-Away" zones will be automatically bypassed. When the system is armed using the [*][9][Access Code] command, the "Armed" light will FLASH to remind the user that the Entry/Exit zones do not have the Entry Delay. This command allows the user to remain on the premises and have an instant alarm on the entry doors.

Important Note about Keypad [*] Commands

The [*] commands will not function when the system is disarmed and the bell or siren is active. In order to use the [*] functions, an Access Code must first be entered to silence the alarm.

Keypad Zones

Three types of alarm may be activated by pressing and holding a single key on the keypad. Note that the [A] Key alarm is silent, and the [P] Key alarm may be either silent or audible. Silent alarms should not be used unless they are programmed to activate the Programmable Outputs, otherwise no alarm indication will be generated when these keys are pressed.

[F] Press and hold the [F] Key for 2 seconds to sound an [F] Key alarm; the siren will sound a pulsed tone. The keypad will sound a series of short beeps once the system has accepted the alarm.

[A] Press and hold the [A] Key for 2 seconds to generate an [A] Key alarm; the siren will not sound when this function is activated. The keypad will sound a series of short beeps once the system has accepted the alarm. Refer to Programming Section [4] for information on programming one of the Programmable Outputs to be activated when this key is pressed.

[P] Press and hold the [P] Key for 2 seconds to generate a [P] Key alarm; the keypad will sound a series of short beeps once the system has accepted the alarm. This alarm may be programmed as either silent or audible; refer to Programming Section [5]. When programmed as "audible", the siren will sound a steady tone. Refer to Programming Section [4] for information on programming one of the Programmable Outputs to be activated when this key is pressed.

Adjusting the Keypad Sounder Tone and Backlighting

The sounder tone and the lighting behind the keys for each Keypad may be individually adjusted. The sounder tone may be set with a loud tone, a softer tone, or no tone at all. The backlighting can be set at medium or high brightness, or it may be turned off.

To adjust the Keypad's sounder, press and hold the [#] Key; after two seconds, the sounder will begin to beep. With each beep, the tone of the beep will increase or decrease. When the desired tone is achieved, release the [#] Key.

To adjust the Keypad's backlighting, press and hold the [*] Key. The zone and status lights will be shut off, and the Keypad will beep as each of the three backlighting levels is shown: medium, high and off. When the desired level is reached, release the [*] Key. Press the [#] Key to return to the "Ready" mode.

If all power to the system is shut off, each Keypad's tone and backlighting will be restored to the factory settings.

With the system disarmed, enter [*][8][Installer's Code]. The system can only be programmed while it is disarmed. The default Installer's Code is [0500]. The Installer's Code should be changed after the system is installed; refer to Programming Section [3].

When the Installer's Programming Command is entered, the "Armed" light will be ON and the "System" light will FLASH to indicate that the system is ready for programming. **NOTE:** If no key entry is made for 2 minutes, the system will return to the "Ready" mode and the Installer's Programming Command will have to be entered again.

With the "Armed" light ON and the "System" light flashing, enter a digit from 1 to 5 to select a Section to program. Note that each section is programmed independently.

Once the section to be programmed is entered, the keypad will beep 3 times; the "Ready" light will come ON, the "Armed" light will be OFF, and the "System" light will FLASH. The system is now ready to accept data for the selected section.

To change the first digit in a section, enter a new digit from the keypad. If you wish to keep the first digit unchanged, enter the same number. After entering the first digit, enter the second digit by pressing a number on the keypad.

After entering the data, press the [#] Key to return to the programming mode. You may then enter another Section for programming. For 2-digit numbers, both digits must be programmed before pressing the [#] Key. Only the data entered before pressing the [#] Key will be changed.

When all data for a section is completely entered, the keypad sounder will beep several times to indicate that all expected data has been entered. When a section is completely programmed, enter the number of the next section to be programmed.

Section [5]: Enabling System Functions

Section [5] allows you to enable or disable various system functions. Refer to the Programming Worksheet to see which features are represented by the Zone Lights. If a feature is enabled, its Zone Light will be ON; if a feature is disabled, its Zone Light will be OFF.

To enable or disable a feature, press the number key corresponding to that feature. If the feature is being enabled, its zone light will come ON; if a feature is being disabled, its zone light will be shut OFF. When all selections have been made, press the [#] Key to save the changes and return to the program mode.

Resetting Programming to the Factory Default Settings

The system may be reset to its factory default programming by following this procedure:

1 Remove all power, AC and battery, from the PC500

2 Remove all wiring connections from the PGM1 and Zone 1 terminals

3 Connect the PGM1 and Zone 1 terminals together

4 Apply power to the PC500 and wait for 10 seconds

5 After approximately 10 seconds, the keypad sounder will beep and Zone Light 1 will come ON

6 Remove all power, AC and battery, from the PC500

7 Remove the connection between the PGM1 and Zone 1 terminals

8 Re-connect original wiring to the PGM1 and Zone 1 terminals

9 Restore power to the PC500; the Programming Sections have now been restored to the factory default settings

PROGRAMMING SECTIONS

[1] Zone Definitions

Enter four 2-digit numbers in this section to determine the operating characteristics of each zone.

Zone Definitions: Digit 1

The first digit of each Zone Definition determines each zone's audible alarm characteristics and response speed. When programmed as *audible*, the siren will sound on alarm; when programmed as *silent*, the siren will not sound on alarm. When silent alarms are used, Programmable Output Option [3] should be used to activate a programmable output when an alarm is generated. If silent alarms are not followed with a programmable output activation, there will be no alarm indication. Refer to Section [4] for information on programming the programmable outputs.

Zone response times are factory set at 500 ms. When programmed as *fast*, the zone response time will be 10 ms. When programmed as *slow*, the zone response time will be 500 ms.

Zone Definitions: Digit 2

Digit 2 determines the zone type as described below:

[0] Standard Delay: The Standard Delay Zone is normally used for Entry/Exit doors. The Exit Delay starts when the system is armed; the zone may be opened and closed during the delay without causing an alarm. When the Exit Delay expires, opening the zone will start the Entry Delay. During the Entry Delay, the keypad buzzer will sound to indicate that the system should be disarmed. If the system is disarmed before the Entry Delay expires, no alarm will be generated. Entry and Exit Delay times may be independently programmed for 1 to 255 seconds in Section [2].

[1] Instant: Instant Zones are normally used for door and window contacts. Instant Zones have the standard Exit Delay, but will generate an *instant* alarm when opened after the Exit Delay expires.

[2] Interior: Interior Zones are normally used with interior motion detectors and have the standard Exit Delay. The zone will also have the standard Entry Delay provided that a Delay Zone has been activated before the Interior Zone. If an Interior zone is tripped before a Delay zone, an alarm will be generated.

[3] Home-Away with Delay: Home-Away Zones operate similarly to Interior Zones with the following additional feature: if the system is armed and a Delay zone is not activated during the Exit Delay time, the Home-Away zones will be automatically bypassed. This feature allows the system to be armed with the Interior Zones automatically bypassed so that the user may remain on the premises.

If a Delay Zone is activated during the Exit Delay, the Entry Delay will be applied to Home-Away with Delay zones when the Exit Delay expires. If a Home-Away with Delay zone is then activated, the Entry Delay will be initiated. If a Home-Away with Delay zone is activated during the Entry Delay, that zone will follow the Entry Delay before generating an alarm if the system is not disarmed.

If the system is armed with the [*][9][Access Code] At-Home Arming Command, zones programmed as Home-Away with Delay will remain bypassed until the system is disarmed.

[4] 24-Hour Steady-Alarm: 24-Hour Steady-Alarm zones are active at all times and will sound an alarm even if the system is disarmed. When a 24-Hour Steady Alarm zone is activated, the bell or siren will sound with a steady tone. The alarm may be silenced by entering an Access Code on the keypad. These zones may be programmed as *silent* when a Programmable Output is enabled; refer to Programming Section [4] for information on setting Programmable Output options.

[5] 24-Hour Pulsed-Alarm: 24-Hour Pulsed-Alarm zones are active at all times and will sound an alarm even if the system is disarmed. When a 24-Hour Pulsed-Alarm zone is activated, the bell or siren will sound with a pulsing tone. The alarm may be silenced by entering an Access Code on the keypad. **NOTE:** 24-Hour Pulsed-Alarm zones should always be programmed as *audible* so the bell/siren output will be activated when an alarm is generated.

[2] System Times

Three system times are programmed in Section [2]; each time requires a 3-digit number. Do not press the [#] Key during data entry.

[1] Entry Delay (001 to 255 seconds) The Entry Delay is the amount of time permitted between the activation of a Delay Zone and the disarming of the system. If the system is not disarmed during this delay, an alarm will be generated. Refer to Section [1] for information on which zone definitions are affected by the Entry Delay. The default Entry Delay is 30 seconds.

[2] Exit Delay (001 to 255 seconds) The Exit Delay is the amount of time allowed to exit the premises after an Access Code is entered to arm the system. During the Exit Delay, a delay zone may be activated to leave the premises; when the Exit Delay expires, the system will be armed. Refer to Section [1] for information on which zone definitions are affected by the Exit Delay. The default Exit Delay is 120 seconds.

[3] Bell Cut-Off (001 to 255 minutes) This time determines how long the bell/siren will sound when an alarm is generated. When an alarm is generated, the bell/siren will sound for this length of time, or until the alarm is silenced by entering an Access Code. The default setting is 4 minutes.

[3] Installer's Code

The default setting for the Installer's Code is [0500]. It is strongly recommended that the Installer's Code be reprogrammed before installation is complete. Be sure to record the new Installer's Code for later reference.

[4] Programmable Output Options (PGM1 and PGM2 Terminals)

The PGM outputs can be programmed to operate in response to various system operations. The output pulse connects the PGM terminal to the negative power rail. Program two 1-digit numbers in Section [4]. The first number entered determines how the PGM1 terminal will operate; the second number entered determines how the PGM2 terminal will operate.

[1] Utility Output: When activated by entering [*][7], the PGM output switches to ground for 5 seconds and the keypad buzzer will sound.

[2] Keypad Sounder Follow Mode: The PGM output switches to ground as long as the keypad sounder is ON.

[3] Latched Alarm Output: The PGM switches to ground after any alarm and remains switched to ground until an Access Code is entered or until the system is disarmed. This output can be used to indicate that an alarm has occurred before entering the premises.

[4] Burglar Alarm / [P] Key: The PGM output switches to ground when there is a burglar alarm, a 24-Hour Steady alarm, or when the [P] Key is pressed. The PGM output will be activated until the Bell Cut-off time expires or until an Access Code is entered.

[5] 24-Hour Pulsed Alarm / [F] Key: The PGM output switches to ground when there is a 24-Hour Pulsed alarm or when the [F] Key is pressed. The PGM output will be activated until the Bell Cut-off time expires or until an Access Code is entered.

[6] [A] Key Alarm: The PGM output switches to ground when the [A] Key is pressed. The PGM output will remain activated until the Bell Cut-off time expires or until an Access Code is entered.

[7] Trouble Output: The PGM output switches to ground when a Trouble condition occurs. The PGM output will remain activated until the trouble condition is corrected.

[8] [F], [A] and [P] Key Alarms: The PGM output switches to ground when any of the keypad alarms are generated by pressing the [F], [A] or [P] Keys. The PGM output will be activated until the Bell Cut-off time expires or until an Access Code is entered.

[5] 1st System Option Code

When Section [5] is entered, the 4 Zone Lights will indicate which options are enabled. If a light is ON, that option is enabled; if a light is OFF, that option is disabled.

To enable or disable an option, press a number from [1] to [4]. If the light indicating the option was OFF, it will come ON; if the light indicating the option was ON, it will go OFF.

LIGHT

[1] ON = Keyswitch Arming enabled
• OFF = Keyswitch Arming disabled

[2] • ON = [P] Key silent
OFF = [P] Key audible

[3] • OFF = ***For Future Use***

[4] • OFF = ***For Future Use***

• Factory default settings

Notes on [P] Key Operation

If the [P] Key is programmed as a silent alarm, it is suggested that one of the Programmable Outputs be programmed with Option 3, Option 4, or Option 8 so that an output is activated when the [P] Key is pressed. The Programmable Output may be used to activate special lighting or a bell or siren other than the one connected to the control panel.

If the [P] Key is not to activate a Programmable Output, do not program the [P] Key as a silent alarm. If enabled but not set to activate a Programmable Output or sound an alarm, no alarm will be generated when the [P] Key is pressed. Ensure that the user is made fully aware of how the [F], [A] and [P] Keys function on their system.

FOR THE RECORD

Customer _____

Address _____

_____

Phone _____ Installation Date _____

CONTACTS

Name _____ Phone _____

Name _____ Phone _____

Name _____ Phone _____

ZONE INFORMATION

Zone	*Type*	*Protected Area*
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____

Entrance Delay _____

Exit Delay _____

Bell Cutoff _____

KEYPAD FUNCTIONS

[P] Key ☐ Audible ☐ Silent

NOTES

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

PROGRAMMING WORKSHEET

[1] Zone Definitions Page 11

NOTE: When defining zones, assign delay zones first, then assign the other types.

Default		
0,0	___	Zone 1
0,1	___	Zone 2
0,2	___	Zone 3
0,2	___	Zone 4

Digit 1

- **[0]** Slow / Audible
- **[1]** Slow / Silent
- **[2]** Fast / Audible
- **[3]** Fast / Silent

Digit 2

- **[0]** Standard Delay
- **[1]** Instant
- **[2]** Interior
- **[3]** Home-Away/Delay
- **[4]** 24-Hour Steady Alarm
- **[5]** 24-Hour Pulsed Alarm

[2] System Times Page 12

Default		
0,3,0	___	Entry Delay (seconds)
1,2,0	___	Exit Delay (seconds)
0,0,4	___	Bell Cut-off (minutes)

Valid entries are "001" to "255"; do not enter "000".

[3] Installer's Code Page 12

Default	
0,5,0,0	___

[4] Programmable Output Options (PGM1 and PGM2 Terminals) Page 12

Enter two digits from the list below. The first digit entered determines how PGM1 will operate; the second digit entered determines how PGM2 will operate.

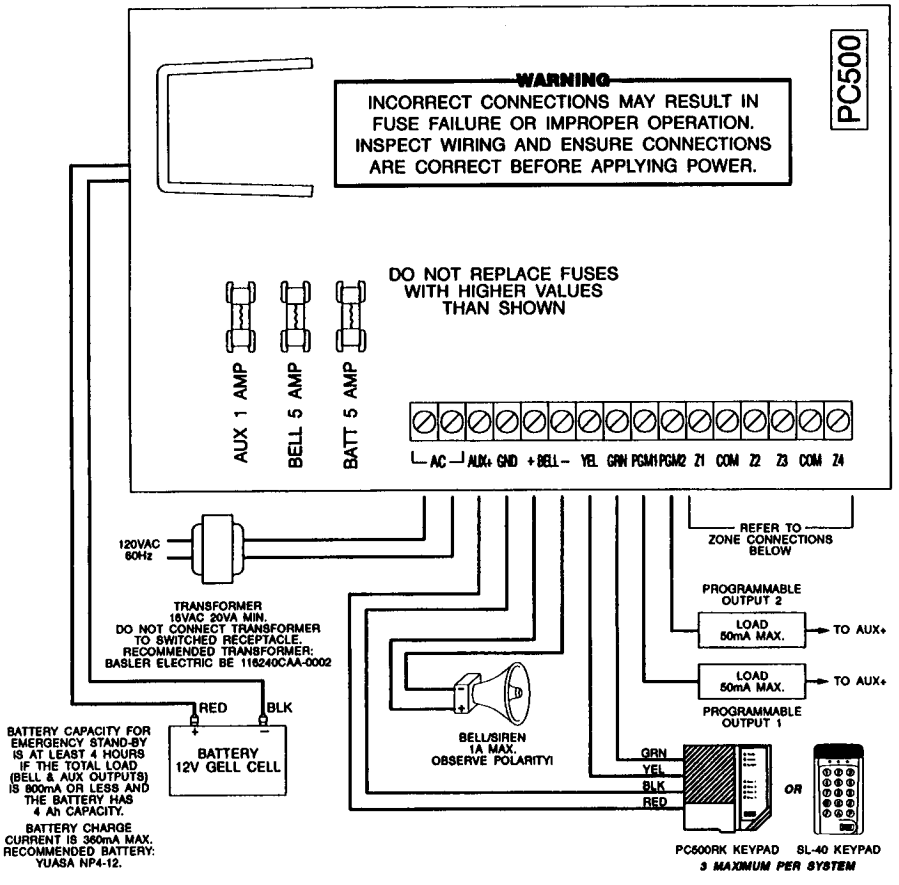
Default		
1,3	___	Programmable Output

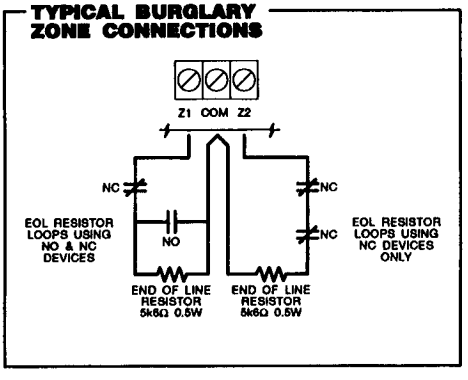
- [1] [*][7] activates PGM
- [2] Keypad sounder follow mode
- [3] Latched alarm
- [4] Burglar Alarm / [P] Key
- [5] 24-Hour Pulsed Alarm / [F] Key
- [6] PGM activates on [A] Key alarm
- [7] PGM activates on Trouble alarm
- [8] PGM activates on any [F], [A] or [P] Key alarm

[5] 1st System Option Code Page 13

Default			Zone Light ON	Zone Light OFF
OFF	___	Zone Light 1	Keyswitch arming enabled	Keyswitch arming disabled
ON	___	Zone Light 2	[P] Key silent	[P] Key audible
OFF	___	Zone Light 3	***For Future Use***	
OFF	___	Zone Light 4	***For Future Use***	

HOOK-UP DIAGRAM


PC500
WARNING
INCORRECT CONNECTIONS MAY RESULT IN FUSE FAILURE OR IMPROPER OPERATION. INSPECT WIRING AND ENSURE CONNECTIONS ARE CORRECT BEFORE APPLYING POWER.
DO NOT REPLACE FUSES WITH HIGHER VALUES THAN SHOWN
AUX 1 AMP
BELL 5 AMP
BATT 5 AMP
AC AUX+ GND +BELL- YEL GRN PGM1 PGM2 Z1 COM Z2 Z3 COM Z4
120VAC 60Hz
TRANSFORMER 16VAC 20VA MIN. DO NOT CONNECT TRANSFORMER TO SWITCHED RECEPTACLE. RECOMMENDED TRANSFORMER: BASLER ELECTRIC BE 116240CAA-0002
RED
BLK
BATTERY CAPACITY FOR EMERGENCY STAND-BY IS AT LEAST 4 HOURS IF THE TOTAL LOAD (BELL & AUX OUTPUTS) IS 900mA OR LESS AND THE BATTERY HAS 4 Ah CAPACITY.
BATTERY CHARGE CURRENT IS 360mA MAX. RECOMMENDED BATTERY: YUASA NP4-12.
BATTERY 12V GELL CELL
BELL/SIREN 1A MAX. OBSERVE POLARITY!
REFER TO ZONE CONNECTIONS BELOW
PROGRAMMABLE OUTPUT 2
LOAD 50mA MAX.
TO AUX+
LOAD 50mA MAX.
TO AUX+
PROGRAMMABLE OUTPUT 1
GRN
YEL
BLK
RED
OR
PC500RK KEYPAD
SL-40 KEYPAD
3 MAXIMUM PER SYSTEM



Recognized limited energy cable should be used. Observe local codes as defined by the authority having jurisdication.

Refer to Installation and Instruction Manuals for complete operating instructions.

Detection devices that require power from the Control Panel should operate over the range of 10.0 to 14.0 VDC.

The DSC BRAVO models are recommended motion detectors. The DSC DG-50 is a recommended glassbreak detector.

Temperature Range: 0°C to 49°C (32°F to 120°F). Maximum Humidity: 85% relative humidity

LIMITED WARRANTY

Digital Security Controls Ltd. warrants that for a period of twelve months from the date of purchase, the product shall be free of defect in materials and workmanship under normal use and that in fulfilment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. This warranty contains the entire warranty. Digital Security Controls Ltd. neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

FCC COMPLIANCE

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4